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Technology Center 2600

Appl. No. : 09/384,141
Applicant : Ikko FUSHIKI et al.
Filed : August 27, 1999
Title : Visually Error-Free Color Image Representation

TC/A.U. : 2623
Examiner : LaRose, C.

Docket No. : 003797.81834
Confirmation No. : 7425

MAIL STOP AF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.132

Sir:

I, Michael Stokes, hereby declare as follows:

1. I am the Michael Stokes who is named a co-author of the article entitled, "A Standard Default Color Space for the Internet – sRGB" that is a reference being applied in the above-identified matter.
2. I am presently employed by Microsoft Corporation (Microsoft) and have been since October 1999. Microsoft is the assignee of the above-identified application.
3. I am familiar with the instant application, the Final Office Action dated August 14, 2003, U.S. Patent No. 5,946,113 to Pritchett (hereinafter referred to as *Pritchett*) and the article entitled, "A Standard Default Color Space for the Internet – sRGB" (hereinafter referred to as *Article*).

4. I consider myself to have been one skilled in the art at the time of filing the present invention on August 27, 1999, and on May 21, 1999, the date to which the present invention claims priority. I consider myself to be one skilled in the art today.

5. It would have been understood by one skilled in the art at the time of filing the present invention and at the time that the present invention claims priority that a perceptual-based color space, by definition, included a gamma value of 2.2. Further, it would have been understood by one skilled in the art at the time of filing the present invention and at the time that the present invention claims priority that a physical-based color space, by definition, included a gamma value of 1.0.

6. It would have been understood by one skilled in the art at the time of filing the present invention and at the time that the present invention claims priority that *Pritchett* was limited to operation within a perceptual-based color space. In support, *Pritchett* fails to disclose or describe gamma correction in any of its figures or text. To convert from a perceptual-based color space (2.2 gamma value) to a physical-based color space (1.0 gamma value), gamma correction is required. Because gamma correction is not taught by *Pritchett*, *Pritchett* only teaches and operates within one of all perceptual color spaces or all physical color spaces. As discussed below, *Pritchett* only operates within perceptual-based color spaces.

7. First, the figures and text of *Pritchett* describe matrix conversions and bias offsets. It would have been understood by one skilled in the art at the time of the present invention and at the time that the present invention claims priority that matrix conversions and bias offsets were linear operations that did not convert between color spaces. A matrix conversion is equivalent to a multiplication operation and is thus linear. A bias offset is equivalent to an addition operation and is thus linear.

8. Second, every single color space identified and described within *Pritchett* is a perceptual-based color space. RGB, YUV, YCrCb, CMYK, HIS, and HSV color spaces would have been understood by one skilled in the art at the time of the present invention and at the time

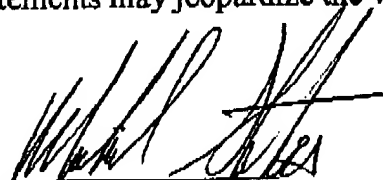
that the present invention claims priority to have been perceptual-based color spaces. Each of these color spaces has a 2.2 gamma value. Therefore, conversion from a perceptual-based color space to a physical-based color space would have required gamma correction. As stated above, gamma correction is not taught, described, disclosed, or otherwise suggested in *Pritchett*.

9. Third, the figures and text of *Pritchett* indicate that input and output signals go directly to video encoder and video decoder devices. It would have been understood by one skilled in the art at the time of filing of the present invention and at the time that the present invention claims priority that these video encoder and video decoder devices only received/transmitted perceptual-based color space signals.

10. *Pritchett* describes an extended RGB color space. Under *Pritchett*, the extended RGB color space provides additional headroom (as compared with RGB color space) to accommodate the entire dynamic range of valid colors in the original color space. Additionally, *Pritchett* describes how each component of the extended RGB color space is -4 to 4 represented with thirteen bits including ten fractional bits. (See *Pritchett*, col. 6, lines 7-22). However, *Pritchett* describes an extended RGB color space that is perceptual-based. The extended RGB color space of *Pritchett* ensures that conversion from one perceptual-based color space to a second perceptual-based color space will not result in the loss of data. Indeed, the entire conversion process of *Pritchett* is limited to operation within perceptual-based color spaces. As explicitly stated in *Pritchett*, "extended RGB color space is identical to RGB color space except for an increase in the valid range of components of extended RGB color space." (*Pritchett*, col. 6, lines 7-9). One skilled in the art at the time of filing the present invention and at the time that the present invention claims priority would have understood that the extended color space of *Pritchett* was only directed to an extended perceptual-based color space.

11. Based upon the above-identified support, one skilled in the art at the time of filing of the present invention and at the time that the present invention claims priority would have understood *Pritchett* to have been limited to perceptual-based color spaces and that *Pritchett* described conversion from one perceptual-based color space to a second perceptual-based color space through an extended perceptual-based color space.

12. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.


Michael Stokes

11/12/2003
Date